

ABSTRACT

A double shoulder drill stem connection for high torque applications includes a thread taper within a range between about 1.0 and 1.2 inch per foot. The thread form is characterized by a stab angle between about 35 and 42 and a load angle between about 25 and 34 degrees and by a short thread height with elliptical roots and with crests having an angle which slopes in an opposite direction with respect to the joint centerline from the thread taper. A drill string includes a tool joint having different inner diameters for a substantial axial length to provide enhanced strength in the threaded portion of the joint.